



UNITED STATES
NUCLEAR WASTE TECHNICAL REVIEW BOARD
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External Affairs

U.S. NWTRB Releases Reports on Efforts in the U.S. and Other Countries to Design a Repository Siting Process

On November 20, 2015, the U.S. Nuclear Waste Technical Review Board issued two reports: *Designing a Process for Selecting a Site for a Deep-Mined, Geologic Repository for High-Level Radioactive Waste and Spent Nuclear Fuel: Overview and Summary*, and *Designing a Process for Selecting a Site for a Deep-Mined, Geologic Repository for High-Level Radioactive Waste and Spent Nuclear Fuel: Detailed Analysis*. The Reports are available on the Board's website at www.nwtrb.gov.

The Board's objective in writing both documents is to provide policymakers with information about efforts in the United States and other countries to site a deep-mined, geologic repository for high-level radioactive waste (HLW) and spent nuclear fuel (SNF). The reports rely on a comparative historical inquiry into two dozen siting efforts that have taken place over the past half century in ten different nations. The *Overview and Summary* is a short synopsis of the major insights that derive from that study. The *Detailed Analysis* is an in-depth account that provides the empirical foundation for those insights.

In keeping with the Board's technical and scientific mandate, the Board takes no position on whether a new effort should or will be undertaken to site either the country's first or second repository; that decision will be made by policymakers. The two documents do include four recommendations related to technical practices that the Board believes should be adopted *if* policymakers decide to restart a site-selection process for a deep-mined geologic repository in the United States. In particular, the recommendations address the preparation of site-suitability criteria to replace the Department of Energy's (DOE's) 1984 *Siting Guidelines* and the timing of when a state might object to the President's nomination of a repository site.

- *The Board recommends that DOE's 1984 Siting Guidelines be adopted as a sound basis for developing any new rules that might structure a future siting process. A site-*

suitability regulation that relies on a technically complex performance assessment, such as DOE's 2001 regulation for Yucca Mountain, does not provide a sound basis for the initial stages of site selection.

- *The Board recommends that the 1984 Siting Guidelines be supplemented with Host-Rock-Specific Criteria that are applicable to the geology-specific concepts (including relevant engineered barriers) that have been advanced for disposing of HLW and SNF in salt, crystalline rock, or clay/shale formations and their associated environmental settings.*
- *The Board recommends that, to the greatest extent possible, the development of any new site-suitability criteria minimize the ambiguity that facilitates the implementer's discretion in applying them, helping ensure the objectivity of the process and public confidence in its outcome. If, at any point during the siting process, the criteria need to be changed, the implementer should use a transparent and meaningfully participatory process to do so.*
- *The Board recommends that any new siting process preserve the requirement in the 1982 Nuclear Waste Policy Act that a final choice of site await extensive underground characterization.*

The Board was established in the Nuclear Waste Policy Amendments Act of 1987 to perform ongoing evaluation of the technical and scientific validity of U.S. Department of Energy activities related to implementing the Nuclear Waste Policy Act of 1982. The Board is required to report its findings, conclusions, and recommendations to Congress and the Secretary of Energy. Board members serve part time and are appointed by the President from a list of nominees submitted by the National Academy of Sciences. The Board is an independent federal agency in the Executive Branch.

As mentioned above, the two *Reports* and other Board reports, correspondence, testimony and information are available on the Board's website at www.nwtrb.gov.
